

CAPTAIN JOHN C. MILLS, GLOUCESTER, MASS.--INTERVIEW-  
ED BY WILLIAM WAKEHAN, RICHARD RATHBUN AND  
HUGH M. SMITH, NOVEMBER 22, 1893

Master of Sch. "Senator Lodge", of Gloucester.  
Has been master of a mackerel vessel three years.  
Has had 12 years' experience mackereling.

As a whole, does not think the mackerel have decreased. Thinks they are just as abundant now as they were 12 years ago. There have been more mackerel reported this year than any year for 7 or 8 years, but the catch has not been as large as in other years, because the fleet is smaller.

Does not think the purse seine harms the fish in any way. Does not think it decreases their number. Does not see why the purse seine should scare mackerel any more than the net. A purse seine is only in the water for a few months; not like the net that is set day in and day out, to frighten<sup>h</sup> the fish.

Does not<sup>know</sup> what object there would be to have any regulations.

Before they had the close season, some did well, and afterwards a number of vessels went south

and none of them did very well. Of course it might be better next year.

Does not think the close season did any particular good. All the fish that are caught south are spawn fish, and the less of them that are caught the more tendency it would have to increase them. Only once in a while a year that there were many fish caught south.

Does not see why it would be any protection to the fishermen to have a close season. Some fishermen go south and lose money and some go and make money. Out of 30 or 40 sails that went last spring, does not think 10 made a profit.

Has nothing to say about regulations, because he does not know anything about it.

All kinds of fish that are caught with the purse seine have peculiarities--some years there will be an abundance of them, and some years will not be any. For a few years there were hardly any mackerel on the New England coast, but now they are plenty enough, and the purse seine has been in use all the time.

He never did any hook and line fishing.

Mackerel go to the east and north in the spring, and they are full of spawn when they go down by



Cape Breton in June. That is, anywhere from the first to the middle of June. Some years they will vary a week or so. After we lose them there, we do not get any mackerel to amount to anything until along in July or August, and they are pretty much done spawning, so they sink somewheres down in that vicinity, and nobody knows just where the spawning ground is. Does not think anybody knows when they go out of sight to spawn, or when they are done spawning. Occasionally will find mackerel along in August with some spawn in them, in the Gulf of St. Lawrence. Does not remember of seeing any on this coast, but has in the Gulf. That is, scattering fish that would have some spawn in them.

The most important purse seine fishing ground, as a whole, is the New England coast. The coast of Maine and Massachusetts is the most profitable. Of course we get no mackerel on the New England coast until about the first of June. Then they will begin to strike on the coast here, and we get more or less from then on to November. That fishing extends off-shore to Georges anywhere from against the rocks to 130 miles off. They do not go to Georges much nowadays, except in the spring. There is very little fishing on Georges for mack-

erel, with this exception. The Bay of Fundy is quite a place for mackerel. Has been in former years, but this last summer not many fish there, but a year ago this summer there was a good catch of mackerel there.

A large body of mackerel go into the Gulf of St. Lawrence. They go regularly every year. We know that by the nets on the Cape Shore. The nets catch more or less fish every year. This fall the nets have done remarkably well on the Cape Shore. If they have westerly or northerly winds the fish go closer to the land, but if they have southerly winds the fish keep out to sea, and do not go in near enough to fish with the nets.

Some years they school as much in the Gulf as they do on the New England coast, and some years they do not. Was in the Gulf this year for 2 months--July and August. Was only as far as Canso. The Yosemite and the Norumbega made good hauls there, and the Minnie Maude, a Nova Scotia vessel, and one or two others did well there. That is around Margurie on the north side of Cape Breton.

About 10 sails of Nova Scotia vessels out this year. Most of them hail from around Le Have and Liverpool.

There are two schools which go into the Gulf of St. Lawrence. Does not know but what there are three. This last year was fine weather on the Cape Shore. And more mackerel seen than he ever saw there before. The largest fish come first about May. That is, they enter the Gulf in May. They enter around by Scatteri and Cape Breton. The latter fish seem to be a grade smaller. Some years still later in the summer a small school comes on the Cape Shore. This summer there was quite a large body of small fish around the Cape Shore. The most of the second school go around Cape Breton Island, but some go through the Gut of Canso. Different years they take a little different route. Do not always go the same way every year. Of course the weather has a tendency to vary their habits a little.

Do not find many of these large fish of the first school after they get into the Gulf. Apparently these large fish do not school much. The second school distributes itself more over the Gulf than the first school. The second school shows up in schools more than the first. It is hard to tell where the fish go to that occur so abundantly around

Prince Edwards Island and the Magdalens, because we generally lose them for 3 or 4 weeks, and when they turn up they are distributed all over the Gulf.

more

The fish may go and come <sup>more</sup> regularly than what we know of, on account of the weather; they may keep below the surface. If we have a run of fine weather this year, say the 10th of June, next year we might have a cold wind on that day and they would not show. If the net fishermen are not getting any fish we know they have not come along much yet.

Do not catch as many fish in the night as there used to be. No particular difference between the spring and fall fish in this respect.

This fall there have not been many fish caught on the Cape Shore. Capt. Jacobs got the largest school.

This fall did not see but a few fish schooling in the day time. Mostly in the night.

It is hard to say where the fish strike the Cape Shore first, because it is seldom they strike two years in the same place and the same date.

Most generally in the spring begin to catch their fish around Yarmouth and Cape Sable in the traps. From Halifax to Scatteri they apparently strike



within a day or so, as though it was a big body of fish come in from sea. Looks as though there were millions and millions of fish that seem to move right in from sea.

Fish when moving from one place to another sometimes will move about 4 or 5 miles an hour and at other times do not seem to go any, apparently. Sometimes in the spring on the Cape Shore they will average from 20 to 40 miles in 24 hours. The Senator Lodge, with a good breeze, would go about 10 or 12 miles an hour.

Has never seen predaceous fish chasing mackerel much. Of course whales chase them some, and sword-fish and dog-fish, etc. harass them some. Blue-fish chase mackerel more than any other kind of fish. Does not think squid have much to do with mackerel, although they will eat them when they get them in the net, but do not scare them. This fall in Barnstable Bay, it was full of Blue-fish, and no mackerel went into the Bay at all while the blue-fish were there, while at the same seasons other years they always used to go there. That was in October. After the blue-fish left the mackerel came in. Blue-fish follow the menhaden more than they do the mackerel. Dog-fish follow the mackerel as



much as any other kind of fish, but does not think they will drive the mackerel as much as blue-fish.

Do not see any dog-fish on the Cape Shore in the spring, but find them south quite plentifully. The first dog-fish seen in the Bay for 40 years was last year.

CAPT. JOHN A. MCKINNON, GLOUCESTER, MASS--INTER-  
VIEWED BY WILLIAM WAKEHAM, RICHARD RATH-  
BUN AND HUGH M. SMITH., NOV. 22,  
1893.

Master of Schooner Norumbega. Has been 13 years mackerel fishing with the seines.

The southern fishery began before his time. The first spring he went south was 13 years ago, and they went quite a number of years before that. Has been south every year since that time, with the exception of the last three years.

Most always find the fish down along latitude 37°. Has seen them a little further south than that; as far as Body Island. It looks as though the mackerel come out of the Gulf Stream north of Cape Hatteras. Does not think there is a great body of fish further south.

The fish strike in all along the coast from the direction of the Gulf Stream from Hatteras to Cape Canso. The reason why he thinks so; there is a distance of 300 odd miles from Cape Sable to Cape Canso, and it is a matter of about 24 hours from the time they catch the first fish at Cape Sa-

ble until they catch them at the Magdalens, and we know the fish cannot go that fast. The average rate of the fish is about 4 miles an hour.

See the fish in the southern waters first just on the edge of the soundings. Thinks they do not show off the soundings. Thinks some of the southern fish go as far north as into the St. Lawrence River. They spread out. Around Cape Breton they branch out every way. No doubt some of them go way up on the Labrador coast.

Thinks a proportionate part of the mackerel stop when they find a place that suits them. They stop for feed.

Used to be a good many fish go up through the South Channel, but has not seen them much of late years. Last year a large body of fish came through there. The fish which strike the Massachusetts coast, he thinks, go around over Georges. Those fish which come up around Boston Bay and the Maine coast must come up through the South Channel. The fish that go over the southeast part of Georges, he thinks, go on the shore near Cape Sable, which splits them; a part going into the Bay of Fundy and a part following the Cape Shore.

Find the first school of fish <sup>on</sup> Brown's Bank,

about the 1st to the 10th of May. And they would be found at Cape North about the 25th or 26th of May; that is, scattering fish; and between the 2nd and 3rd of June the bodies go along. These scattering ones would go three or four days before the main body. On the 12th of June saw lots of fish going up toward the Gulf.

There are two schools of fish which enter the Gulf, the first being larger fish and distributing themselves generally over the Gulf, while the latter remain about the Magdalens and Prince Edward Island, etc. The smaller fish leave before the large ones. The small fish leave from the first of October on. It depends upon the weather a good deal. The fish work to the westward, going out the same as they go in. If the wind is off the land and nice weather the fish will trim the land very close, but if the wind is on shore they keep off. The best fishing on the Cape Shore is very close inshore, from 10 to 20 miles off.

He followed a single school at one time, about 5 years ago, for about 6 miles and gave it up. Cannot follow a single school any great distance.

There is a patch of ground off the Delaware

Breakwater where the fish used to lay and feed a spell. This year they lay there a little while.

The fish ought to be out of the Gulf of St. Lawrence about the last of November. They might catch a very few into December, but not many. Has caught fish there himself the 8th of November. That is the latest he has ever caught them there. Got fish north of Scatteri this year on the 7th of November. They were going out of the Gulf. After leaving the Gulf, the fish are on the Cape Shore only a few days at the most, and passing along. If the water is all right they may trim the shore as far as Cape Sable. Some may go directly to the Gulf Stream. Has never followed them out to sea, but along the shore.

The latter part of September the fish begin to work west. There was a tremendous body of fish in the Bay of Fundy, and in August they left and went ~~xxxxx~~ out S.S.E. to sea to the eastward of Georges. In old times they used generally to begin to leave the latter part of September and work slowly up west by Cape Cod.

This large body of fish which were found late this year in Massachusetts Bay he thinks came in from sea. They were not seen anywhere before in



the Gulf of Maine. It has been reported that there were fish on Georges during the summer, and that may have been the body of fish that came in so abundantly in the fall.

Mackerel have lots of enemies. The blue-fish is a very bad one, and there are porpoises, sword fish, whales, gamets, squids and albacores. They destroy very many fish. Nine-tenths of the fish that are destroyed are destroyed by these enemies, and not more than one-tenth by man.

Sometimes catch mackerel, and squid with them, and when we get fish about half squid and half mackerel, two-thirds of the mackerel would be disfigured; the squid would take a piece right out of them, and it disfigures them so we cannot put them on the market. That happens about all over the grounds, depending upon the season of the year, etc. Considers squid one of the most destructive enemies to mackerel.

Last year the blue-fish got into the bays inside of the mackerel and drove them off to sea earlier than they would have gone otherwise. This was about the latter part of September. It was all along the coast down as far as Grand Manan.

Gannets eat a good many mackerel. Find the

gannets with them in the spring from Body Island, the earliest fishing, and they follow them right along. They go on into the Gulf.

In the southern waters the sea geese are considered an indication of the presence of mackerel. These birds feed upon the food of the mackerel, not upon the mackerel. Gulls do not feed upon mackerel.

The fish school about the same when they leave the coast as when they come on, but they do not show quite as much, the weather being colder and more stormy.

The temperature of the water makes some difference with the movements of the fish north in the spring, but when it comes time for them to move along they go up nearly the same time; may vary a day or two, but that is about all.

When the fish get down to a cold temperature it causes them to spawn further south than they would if the weather was warm.

Has been in the Gulf as early as the 25th of May. The earliest he has seen fish in the Gulf was the 3rd of June, but saw no ice there then.

The furthest south he has seen the fish in the fall is Cape Cod, but others have reported fish as far south as off New York. He went as far as

that one fall, but got no fish. But when they went in near the land to take the fish on their way south they heard that the fish were going south broad off from the land and he got none.

The Captain spoke of the great uncertainty of finding mackerel. May be on the watch for them for two or three weeks. He has cruised for three months over the same ground without seeing them, and then they would come up all of a sudden with no indication of where they came from.

Has known of fish being taken in March, about the 15th.

Has seen tinker mackerel in the stomachs of codfish on Georges in the winter. In Fortune Bay, in December, has taken a few scattering mackerel among the herring; about a peck of them out of 40 barrels of herring. When those small fish are leaving the coast undoubtedly they fall in with these herring and get mixed in with them.

The furthest off shore he has ever seen mackerel was 90 miles off the Cape Shore, south from Cape Sable. Saw a school of them there in the night. Those fish go over the southeast part of Georges, about 140 or 150 miles from Cape Sable. That would be the nearest land.

The best fishing he ever saw was anywhere from Cape Cod to Grand Manan, but there is no best fishing of late years. The whole coast was alive with fish in old days. He considers that of late years people who have kept on this coast have done the best, but he has obtained the best results in English waters during the last 8 or 9 years.

Mackerel are generally mixed in schools. Do not run exactly the same size. There are certain schools in certain localities that are pretty much the same. Tinkers will associate with the large fish, and the large fish feed on them to a certain extent. Has taken young mackerel probably 5 or 6 inches long out of the stomachs of larger mackerel; taken off Sidney, there being as many as 5 or 6 in the stomach of a single fish.

The last fish he caught, their stomachs were chock full of sand fleas. Between P. E. I. and Cape Breton, especially, all this year the stomachs of mackerel were filled with the red food during about all the season.

Thinks there are as many large fish in the schools now as there were when they began fishing.

Mackerel feed some when they are spawning. They go down below the surface when they spawn.



Thinks they go to the bottom when they spawn. They will remain down three weeks sometimes. They are very dull, logy and sick about that time.

Mackerel spawn all the way from down south clear up as far north as they go. Never saw spawn running from mackerel in the southern fishery. All bodies of fish do not spawn at the same time. In some the spawn would be ripe, and others it would be hard. They spawn in the Gulf of St. Lawrence in June. The latter part of June and in July the fish will show in schools, indicating that they have deposited their spawn, but could not say that some do not spawn in July. Has seen them with spawn in them in July and August in the Gulf, just scattering ones. Around Block Island they spawn about in May. On this coast they spawn about the same time. Considers that June is the general spawning month.

Does not think there has been any decrease in the quantity. He thinks the fish do not show alike every year, and therefore the catches will vary, but has no evidence to show that they have decreased. Has seen as many mackerel this year as he ever has in his life. The fish have not shown, or come on to the coast, during the last 6 or 7 years, which



accounts for the light catch during that time. He caught, in all, 6,000 or 7,000 fish south this year.

Thinks there should be no regulation regarding the purse seine fishery at any time. Does not think it has been any injury to the fish at all. Does not think the fish need any protection before they spawn. Thinks other fish destroy a good deal more than are destroyed by man.

Does not think the close season did any good. Never saw so few fish south as he saw this year. That law was passed because some of these people thought they would increase the supply, but, you know, we are all liable to mistakes. They hoped to increase the supply by not catching the spawning fish. The idea of that is this: If they are going to stop people from catching these mackerel before they spawn, there would be nobody to catch them at all; because, unless we can catch them in the spring, we cannot get them at all to amount to much. Cannot afford to fish if they only have a few weeks to catch them in.

Does not see that it makes any difference whether the mother fish are caught with the purse seine or with the traps. It is just as bad to catch them in the traps as it is with the purse seine.

Might not take as many with the hook and line. They will not take the hook so well in the spring. Never caught them well in the spring with the hook and line in the southern waters, but used to take some.

For the last 10 years, all but one, we found these small mackerel in the Gulf waters that are that year's spawn. Find them in abundance, but failed to find out where they go. But the next year do not find these same fish that should be a year older. Mackerel grow quite fast the first year. Grow to five inches before leaving the Gulf. Knows of one man who has caught 11 barrels of these small fish and sold them for \$11.00 a barrel, about 1,700 or 1,800 in a barrel. They make chowder out of them down south. These are what they call penny fish.

Ten-inch mackerel this year brought \$1.50 to \$2.00 a barrel--as much as the larger fish. He caught mackerel at the Magdalens this year that 110 or 112 of them made a barrel.

The spring fishery is done at a loss to some people, but he never lost anything in it, but a large majority would lose. People in this country always take their chances.

These vessels cost \$11,000 or \$12,000 with seines and two boats, and if  $\pi$  commission a vessel and take no quantity of fish, it is going to cost considerable money.

He has made money at the southern fishery. Has been down there 18 springs. The only spring he did not get any fish he picked up a three-master that was wrecked.

CAPTAIN SOLOMON A. ROWE, GLOUCESTER, MASS--INTER-  
VIEWED BY WILLIAM WAKEHAM, RICHARD RATH-  
BUN AND HUGH M. SMITH, NOV.  
22, 1893.

Aged 44. Master of the Sch. "William H. Cross",  
of Gloucester. Made his last trip this season in  
the "Lottie Gardner", which came in Nov. 20, two  
days ago. Has had experience in the mackerel fish-  
ery since 1857.

Began in the menhaden fishery in 1859. At  
that time used to fish for menhaden the 1st of May,  
and on the 13th of May would catch our first men-  
haden off here. Would work until about the 15th of  
August with menhaden and then would begin on the  
mackerel. Menhaden were used for toll bait in those  
days for the mackerel in the Bay.

Went south first in 1874 with Capt. Charles  
Lee. Began to follow the fish up to the Cape  
Shore about 7 years ago. Some had gone on the  
Cape Shore a little before that, but not a great  
many.

When the schools go north from the south, it  
looks as if a good many fish that go on the Cape

Shore strike right in from off-shore. There is a proportionate number that cross Groeges from the southward.

When we first come in with the fish on the Cape Shore, do not have very hard work to catch them. They are moving along quite rapidly, but about every school we get a chance to set at we catch. Before they get to the Cape Shore do not catch many, as they are moving fast.

Thinks that when they sink they are on the spawning ground. There have been years when we caught them right along all the season. In 1874 the large fish that were off South Shoal Light Ship the whole of June and July, when they struck our coast, never sunk for the whole year. The bulk of the fish were caught that year with the purse seine.

Fish a little every year with the hook and line. Do not catch as well with the hook and line as they used to.

Sometimes see the spawn running from the mackerel. Has seen it as long as from the 15th to 18th of July, both on this coast and in the Bay Chaleur; that is, the Gulf of St. Lawrence.

Was engaged in the hand-line fishery two seasons 1862-3, from about the 20th of July. That would be



all up and down Prince Edwards Island and the Magdalenens, and up to the northward.

Does not think they find as many large fish as they used to.

Does not think there are as many fish as there used to be.

There are more seiners catching them now.

Used to be more hook and line<sup>r</sup> than there are now. The seining did not disturb the fish much, but made it difficult to catch them with hook and line.

Fish these late years do not show as they used to when he first commenced to go with his father; who is the oldest man at the business in this place, and the first man who started with the purse seine. Capt. Rowe's father's name is Solomon Rowe. His father first began to use the purse seine in about 1851. Never used to go further south than Cape Cod and off Barnstable Bay and Cape Ann, with the first seines. When they fished in the beginning around Cape Cod and Cape Ann, used to go about the 1st of May. That is, when they first began to go seining there.

Does not know whether the fish have decreased or not. They do not show as they used to. Used

to have no trouble in catching fish. Used to see them ringing right around and round. Now they are going as fast as they can go.

Menhaden generally go along slow. Hardly ever cartwheel.

The movements of the mackerel are regulated a good deal by the winds. S.S.W. are the best winds for catching mackerel. Thinks the weather has a good deal to do with the fish; that is, in showing.

There have been years when the purse seine has injured the fish, and other years it has not. It injured them when they threw away so many. That was about in 1880. He went south in 1885. Was in with 4 trips, and did not get enough to pay his expenses. Had 130 barrels the first trip, and did not get \$10. out of it. Carried in 1,200 barrels and got \$600 out of them that spring.

The more seines we set the wilder the fish seem to get. The more anything is hectorred the quicker it will get out of the way. A year ago this summer we set 12 times and got 11 schools of fish. The next day did not set so many times, but they were harder to get.

Does not think any legislation should be put

upon catching fish. If they have to go fishing, thinks they should go the whole season round. The more fish there are caught the less there are in the water, but does not think the fleet that has been operating the last few years has caught enough to do them any particular harm. We commence a good deal earlier to catch fish now than we used to, but knock off earlier in the fall; that is, most of the vessels.

The fish we catch in the spring before a certain date are full of spawn. If there were a million barrels of fish caught in the spring that are full of spawn; if they were let go there would be just so many more fish in the water.

Does not think the close season for the past five years has helped the fishery any. When we used to go south we could keep around the fish and do well. This year there were no fish caught there. This is the first year he has been south since the law was put on. There was a heavy body of fish south this spring, but very few caught.

Would not think it wise to make a close season early in the year. Thinks the close season ought to be from the 15th of June to the 1st of August.

Hardly think it would be advisable to have such a close season, as they have it hard enough now.

Menhaden on this coast used to be very plenty, but since they got these large oil works started on this coast menhaden seemed to disappear, and are not as abundant as they used to be.

The best fishing is from August to the last of September. That is, we get the biggest prices then, and probably the most fish.

The Gulf of St. Lawrence is not a profitable fishery as a whole. Never make a great amount of money down there.

Never saw more fish in his life on the Cape Shore going into the Gulf than he saw this spring. They were more abundant there than they were south this year. A large body of fish went into the Gulf this year. Has not been fishing but about 7 years on the Cape Shore. Sees those fish going that way every spring he has been there.

The fish strike the Cape Shore some springs at what we call Cape Nigger, about 30 miles east of Cape Sable, and other years further to the east. This year the first fish we saw were off White Head 15 miles to the westward of Canso. He was down



there as early as the others.

They generally strike the Cape Shore about the 25th of May, and from that to the first of June.

The 25th of May is about the usual time.

Thinks Capt. Joseph Swim got his first fish a little earlier than they were seen off White Head, at Egg Rock, probably 20 miles to the east of Halifax. And others caught them about 20 miles to the eastward of him. All this was before they saw them at White Head.

Those are large fish that go down at that time. They go in around Cape North. Probably some of this first school go up through the Gut of Canso.

There is also a second school comes along that is a more medium fish--1's and 2's. They come about 2 or 3 days later than the large ones. They generally go through the Gut more than they go around.

and 60 miles north of Seven Islands, He has been up to Seven Islands,<sup>A</sup> and has caught fish on the hook up there in 1857. Knows of their occurring up as far as that. Knows of the medium fish which they supposed to belong to the second school being caught up as far as Magdalen River and Seven Islands.



The length of the fish in the first school is from 14 to 16 and 17 inches. The second school about 11 to 13 inches.

Then there is another school that strikes there and stays on the Cape Shore all summer. You will find them most generally in the bays. They do not catch many of these. Those fish are about 6 or 7 inches which stay in the bays and rivers on the Cape Shore, up around Dover. So far as he knows they are rarely taken at all. You will see them along about the first of August, and from that on.

CAPT. WILLIAM M. HARTY, GLOUCESTER, MASS.--INTER-  
VIEWED BY WILLIAM WAKEHAM, RICHARD RATH-  
BUN AND HUGH M. SMITH, NOVEMBER  
22, 1893.

Master of Sch. "Frederick Gerring, Jr." Has  
had 40 years experience as a fisherman. All that  
time in the mackerel fishery.

When they went hooking <sup>al</sup> together used to go cod  
fishing until about the 4th of July, and then start-  
ed for the Gulf of St. Lawrence.

Does not think mackerel are as abundant as  
when he first went fishing. In 1871 he caught a  
trip in a week with the hook, and when he started  
for home they run for 60 or 70 miles through noth-  
ing but solid mackerel in every direction. Now if  
you see them extending for 6 miles you think it is  
a pretty good body.

Has seen them at Prince Edwards Island, noth-  
ing but mackerel, inshore and off.

In 1862 we went into the Bay; left here the  
14th or 15th and about the 22nd of June got to  
North Cape and caught 80 barrels the first day.  
The next day we went around <sup>west of</sup> the Cape, and took 60  
barrels, and the next day 40. Then we run up the

Bay Chaleur and caught 108 barrels in three days there. Then left there and went on Orphans Bank, and in three days filled our vessel full. In just 28 days we got back down with a full trip.

There was a large fleet there that year. The whole American fleet, about 300 vessels. Just as many fishing there then as now, but the vessels were not quite as large, about 15 to 18 men, more or less. About 65 tons would be the average.

Has been south fishing 8 or 9 years for fresh mackerel. But 2 or 3 years salt mackerel fishing.

When they went hooking, used to start south about the first of May. Would meet the fish a little south of New York. Occasionally as far as the mouth of the Delaware. Then would go north with them. Would follow them as far north as Vineyard Sound, when they would have about a trip.

The fish then would sink for spawning, and you might not get any. They would be down about 10 days, and none would be seen schooling.

Then they would come home and go down to the Gulf of St. Lawrence. Some started as early as the first of June. Has known vessels to leave here the latter part of May, but the bulk of the fleet went in the Gulf about the 4th of July. That is,

they would leave here about the 4th, get into the Gulf about the 10th or 20th. That fishing ceased about 1872.

Commenced to get lots of seines then. As the seines increased the hook and line fishing diminished, because there was no baitheaved.

The fish work a little wider off now in going down to the Gulf than they used to. No fish on this coast at all now. Thinks that the constant seining of fish at the south has driven them off shore. He thinks that this year and last year they have worked in again, because there has been no one driving at them for the past 4 or 5 years.

Once if you began seining in the night would always get a school of mackerel, but now you miss them about as often as you do in the day.

There is a change to be noticed in the habits of mackerel, from earlier times.

The trawls drive codfish from one bank to another. What kills fish with the trawls so much, is lots of fish lying dead on the bottom on those trawls, and the fish will never stop there. Will leave that ground afterwards. A great many trawls lost that way. They have lost a whole set, and not got a hook out of the whole set. A vessel the other



day lost 40,000 hooks at one set. Trawl fishing injures shore fishing.

Have been catching mackerel on the Cape Shore in the spring for 10 or 12 years. Did not go before that because they did not know the fish were there so early. Did not think they were so plenty. Considers the Cape Shore, if clear weather, about a sure thing. Some springs it is so foggy that they get very few. Needs to be good weather.

The fish there go right into the Gulf and feed on the bottom. If people would heave bait there as they used to would catch them just the same. Never knew so many fish off Marguerie and some of those places as there were this fall.

Has fished up the river St. Lawrence to St. Anns. Has seen plenty of fish up there. Has not been to the Seven Islands since about 1859.

In 1881-2-3-4 there was as good fishing on this coast and the Bay of Fundy as we have ever had. The vessel he was in cleared \$15,000 in one year.

They used to get lots of mixed fish up there, and would throw the small ones away.

If the purse seine were given up, he thinks the fishery could go on with hand lines just as well as



before. Around Block Island and No Man's Land every year about 100 sails, small crews, go there to fish with hook and line, and they heave bait and keep fish biting there every year.

Would make the close season up to the 1st of July.

About the 1st of June is just the time when they are spawning. Fish spawn around Block Island the latter part of June. On the coast of Maine and on this coast they sink and you do not see so many of them. In the Gulf fish do not spawn much before the 1st of July, and into July. Has seen fish caught the latter part of July full of spawn. That is scattering ones.

Late this fall a school of fish struck at No Man's Land, and were just as poor as spring mackerel and full of spawn. That was in October.

Would allow them to fish with hook and line at any time. The more bait they have the better it would be.

Thinks it would be better not to use the purse seine at all. As a compromise, would say that a close season up to the 10th of July would do some good.

He was the first one that ever went into the

Gulf with a purse seine. That was in 1854. We smuggled it over to fish with it. Got the seine here and got a Nova Scotia vessel and put it in. A part of our crew went from there. Did not have the right to fish down there then. That was the only vessel there that year. Did not go down there again with the purse seine.

Solomon Rowe was the first man to catch mackerel off here in deep water with the purse seine. That was in 1855.

Thinks a larger number of people were benefited in the old days of hook and lining than now.

In the spring the fish go about E.N.E. All the fish that go up in the Nova Scotia region come from the Gulf Stream over Georges and down to the Nova Scotia coast. But those fish that strike Scattered about the same time were never out as far as Georges. The fish that are south get along about Nantucket and Block Island and then they stay and spawn. The fish here in Cape Cod Bay in the spring are the ones that strike down along the Delaware and Chesapeake. They work along in about 28 to 40 fathoms of water. The school that comes into Cape Cod Bay comes in through Nantucket Shoals and around there. Thinks some come through Vineyard Sound,

because they catch them in the trap at Falmouth. Thinks those outer schools used to go down closer in shore before the use of purse seine.

Have had traps on the Nova Scotia shore for mackerel about 20 odd years.

In returning south from the north they used to hug the shore closer than they do now. Used to catch so many at Canso and Fox Island years ago that they could not handle them.

There is a first school of very large fish goes into the Gulf and there is a small one. They catch the first school about the latter part of May and the second school comes along not long afterwards, and then a small school comes along about the last of July. Those fish that go in late do not go far north. The second school does not go very far to the north. Not much farther than North Cape or Prince Edward Island. Always large fish in the northern part of the Gulf, and the small fish around P. E. I. Never see small fish around the Magdalen. Fish at times go through the Gut of Canso. The second schools are apt to go through the Gut of Canso. (Calls Antigonish Bay, what Dr. Wakeham calls St. Georges Bay). The best hooking he ever saw was from Cape George to Punkett Island.

Those were large fish.

When the fish are going south they go out through the Gut of Canso also. Thinks the wind has a good deal to do with it. Does not know when the large fish are all out of the Gulf. Has caught them on the hook the 16th day of November off Georgetown. Caught 45 barrels one day and 65 another. Does not know whether they stay later than that or not.

Has caught mackerel the 25th of November on the coast of Maine. Vessels knock off earlier now than when they went hooking. They will fish around Block Island until as late as December. Has sometimes caught them there then.

The furthest<sup>seen</sup> off shore he has ~~caught~~ fish at the south was the edge of the Gulf Stream, just about on the edge of soundings, in about 100 fathoms of water.

Has never caught mackerel in the winter, unless it was a few scattering ones on Georges in codfish. Once in a great while they will catch a few scattering ones among the herring at Newfoundland.

While torching herring last night in Ipswich Bay they caught quite a lot of mackerel mixed with



the herring. Those would be this spring's mackerel. A few were last year's spawn. These were about 5 inches in length, but a few would go 7 or 8 inches.

The best place for hook and line fishing on this coast is around Block Island, Gay Head and No Man's Land. For purse seining it does not make any difference. They will go until they find them. Some of the best places to hook mackerel are right off brooks and such places. Never saw them amongst the ice.

All kinds of fish prey upon mackerel, that are large enough. Codfish, porpoises, sharks, swordfish, and all sorts of fish. On this coast bluefish are the most destructive. There is a fish that is worst than any of them, especially in the Gulf of St. Lawrence, and that is albacore. Squid cannot trouble mackerel a great deal, but will eat them up if they get them in the nets, but they do not drive them. Cannot do much with them in the open sea.

Some years there will be all sizes of fish in the same school. At Block Island this year there would be 3 or 4 different sizes. The first school that goes in the Gulf of St. Lawrence are all large



fish. They mix more on this coast than they do in the Gulf. Those big fish in the Gulf keep clear of the summer fish.

Some fish stay on the Cape Shore during the season. The first schools pass right along and do not stop.

The first fish that come along go very fast; as fast as you can sail. Some of those fish go up to the Seven Islands. They are all the largest kind.

The red seed is the most common food for mackerel, unless it is along sandy beaches, where you get the sand fleas. They feed upon shrimps also. All-eyes are a little bit of a fish about an inch long. Mackerel feed upon them a great deal. Find those all-eyes in the Bay of Fundy out of sight of land. Will see the water all full of them. Do not notice that they are in schools. Never notice them in the Gulf.

It is hard to tell whether mackerel feed much during the spawning season or not. Before they spawn they will feed. Will bite like everything on the hook just before they spawn.

After they get the spawn out of them they fatten up fast. Will fatten a little before they get

the spawn all out, for the reason that they stop going so fast when they get ready to spawn, and will then begin to fatten up.

Does not think mackerel grow very much during the winter, because the small fish that leave in the fall, the first you see in the spring are about the same size.

Very early in the spring never see schools about 5 inches in length. One spring Capt. Gray caught a school that were so small he could hardly keep them in the net. That was about 12 years ago. This year out around Block Island there were millions and millions of 5 inch fish, and, in fact, they have been there for 4 or 5 years. Fish that were spawned the year before.

Mackerel come back to the same place where they were spawned.

Never heard of mackerel being seen out beyond the Gulf Stream in winter. Saw fish in the night in 1862, about the 4th or 5th of January, down off the Virginia coast, about 15 or 18 miles off shore. Knew they were mackerel. Was going down for a cargo of oysters.

Some days mackerel will be logy and the next day as wild as the deuce. Do not seem to be very

logy just before spawning. There are times when they get sort of logy and dead when they get filled with that red feed.

Some years we think there are going to be large schools the next year, and it turns out the other way, and another year think they are going to be poor, and it turns right around the other way. Cannot tell much about it, when there are lots of small fish one year, whether there will be large schools the next.

The spring schools in coming up will go about 15 miles each day and each night. About 30 miles in 24 hours. Sometimes they will go about 60 miles in 24 hours. Has seen fish in the middle of the day when you could not keep up with them in a row boat